

WHAT IS CLAIMED IS:

1. Projection lens system In optics that comprise first to third groups of lenses in the order from the closest to a magnified image where the first lens  
5 group of negative refractive power includes one or more aspherical lenses each having an aspherical plane on one or both of the surfaces, the second lens group of positive refractive power includes one or more positive lenses, and the third lens group of positive refractive power includes one or more cemented triplet lenses comprised of three lenses of positive, negative, and  
10 positive power joined in this order,

a projection lens system is characterized by terms and conditions defined as in the following formulae:

- (1)  $0.9 \leq |f1|/f \leq 1.4$   
15 (2)  $2.1 \leq f2/f \leq 3.4$   
(3)  $1.9 \leq f3/f \leq 2.8$

where

f is a total focal length throughout the projecting lens system,  
20 f1 is a focal length of the first group of lenses,  
f2 is a focal length of the second group of lenses, and  
f3 is a focal length of the third group of lenses.

2. The projection lens system according to claim 1, wherein the first group  
25 of lenses include a composite (hybrid) spherical lens(es) of glass which is bonded with thin resin at its surface and then subjected to molding so as to shape an interface between the resin and the air into an aspherical plane.

3. The projection lens system according to claim 1, wherein focusing is attained by displacement of the second group of lenses in a range satisfying the following formula:

5           (4)  $-0.1 \leq 1/\beta_2 \leq 0.1$

where  $\beta_2$  is an imaging magnification.